

REPORT  
OF THE  
JOINT COMMITTEE  
OF THE  
TWENTIETH GENERAL ASSEMBLY  
OF THE  
STATE OF IOWA,  
APPOINTED TO VISIT THE  
STATE AGRICULTURAL COLLEGE  
LOCATED AT  
AMES.

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PRINTED BY ORDER OF THE GENERAL ASSEMBLY.

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DES MOINES:  
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1884.



## REPORT.

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*To the Twentieth General Assembly of the State of Iowa:*

Your committee, appointed pursuant to Joint Resolution No. 10, were ordered to visit the State Agricultural College, and after examination, to report specific answers to certain questions.

In obedience to these instructions, your committee met at the College, and, after organizing, proceeded under the guidance of the President and several of the faculty to make a detailed examination of the several structures upon which the appropriations of the last General Assembly have been expended.

As the result of such examination, your committee are able to report that in their unanimous opinion the appropriations have been expended economically and wisely, and for the objects designated in the acts of appropriation.

The buildings seem well designed for their several purposes, and the material and workmanship have been good throughout.

After due examination and inquiry, your committee are satisfied that no indebtedness has been incurred in excess of the appropriations.

In answer to the fourth subject of inquiry, whether there has been any diversion of money from the specific purpose for which it was drawn from the State treasury, your committee are satisfied that there has been no such diversion beyond the intent of the law.

The names and number of employes, and their compensation in money or otherwise, are shown in the following schedule furnished by the secretary of the board of trustees:

S. A. KNAPP, LL. D., PRESIDENT.

Professor of Practical and Experimental Agriculture.

Salary, \$2,500 and use of house.

C. E. BESSEY, M. Sc., Ph. D., VICE-PRESIDENT,

Professor of Botany, Zoology and Entomology.

Salary, \$2,000 and use of house.

- W. H. WYNN, A. M., Ph. D.,  
Professor of English Literature, Belles Lettres, Latin, History  
and Ethics.  
Salary, \$1,700. Allowed \$100 additional for conducting  
Sabbath services.
- A. THOMPSON, C. E.,  
Professor of Mechanical Engineering and Superintendent of the  
Workshop.  
Salary, \$1,600 and use of house.
- T. E. POPE, A. M.,  
Professor of Chemistry.  
Salary, \$1,700.
- M. STALKER, B. Sc., V. S.,  
Professor of Veterinary Science.  
Salary, \$1,600.
- J. L. BUDD, M. H.,  
Professor of Horticulture.  
Salary, \$1,800.
- E. W. STANTON, B. Sc.,  
Professor of Mathematics and Political Economy, and Secretary  
Board of Trustees.  
Salary, \$2,000 and use of house.
- D. S. FAIRCHILD, M. D.,  
Professor of Pathology, Histology, Therapeutics and Comparative  
Anatomy.  
Salary, \$800.
- C. F. MOUNT, C. E.,  
Professor of Civil Engineering and College Recorder.  
Salary, \$1,400.
- J. C. HAINER, B. Sc.,  
Assistant Professor of Physics and College Proctor.  
Salary, \$1,200.
- MARTHA SINCLAIR, PRECEPTRESS,  
Instructor in English, French and German.  
Salary, \$1,100.
- HERBERT OSBORN, M. Sc.,  
Assistant Professor of Zoology, Entomology and Geology, and  
Curator of the Museum.  
Salary, \$1,200 and use of house.
- T. W. SHEARER, B. Sc.,  
Assistant in the Chemical Laboratory.  
Salary, \$400.

- MARY W. McDONALD,  
Librarian and Instructor in Mathematics and Book-keeping.  
Salary, \$600.
- MRS. EMMA P. EWING,  
Instructor in Theoretical and Practical Domestic Economy.  
Salary, \$500.
- MISS ETTA BUDD, B. Sc.,  
Instructor in Drawing.  
Salary, \$250.
- W. M. GREELEY,  
Treasurer.  
Salary, \$300.
- HERMAN KNAPP, B. Sc.,  
Deputy Treasurer.  
Salary, \$400.
- JAMES RUSH LINCOLN,  
Professor of Military Tactics and College Steward.  
Salary as Professor, \$300; salary as Steward, \$1,000 and  
use of house and board during the school year.
- ERMINA ATHEARN,  
Teacher of Instrumental and Vocal Music.  
Allowed the tuition charged students; also a room,  
board, fires and lights, and incidentals during the  
school year for assisting in keeping order in ladies  
hall.
- As to the means of fire escape and of protection against fire, your  
committee made careful examination, and are satisfied that all dan-  
ger has been reasonably well provided against, both in the plans and  
construction of the buildings, and in the appliances and organiza-  
tions existing for such purposes.
- Your committee being also authorized and requested to present  
other and further report which they may deem necessary to be made  
known to the General Assembly, made as full and complete examina-  
tion as their time allowed, of the courses and methods of study and  
practice pursued in the different departments of the College, as well  
as of the apparatus, machinery, models and appliances gathered there  
for the promotion of the objects of the institution. In this most in-  
teresting task they were most kindly and zealously assisted by all  
with whom they came in contact.
- In examining the courses of study provided, your committee had  
constantly in view the words of the fundamental act of Congress, by



virtue of which the College has derived its chief revenues, to ascertain as far as possible whether the College is organized and working in accordance therewith, or whether it has drifted astray, and if so, to what extent, for they believed the General Assembly would be largely influenced in its dealings with the College by these important considerations.

The act of Congress donating public lands for educational purposes, which act is forever binding upon the States receiving these lands, provides in these words: that "The leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislature may prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

In pursuance of this most wise and comprehensive provision of law, we found organized and in full and successful operation five broad and liberal courses of study, each of which leads to its appropriate diploma. These courses are:

*First.* The general "Course in the sciences related to the industries," which occupies four years, and leads to the degree of Bachelor of Science. (B. S.)

The technical courses aim, while giving a liberal culture, to so direct that culture as to meet the requirements of a special pursuit or profession. These are four, as follows:

I. The "Course in Agriculture," which requires four years of study, and leads to the degree of "Bachelor of Scientific Agriculture." (B. S. A.)

II. The course in "Mechanical Engineering," of four years, and leads to the degree of Bachelor of Mechanical Engineering." (B. M. E.)

III. The course in civil engineering, of four years, leading to the degree of "Bachelor of Civil Engineering," (B. C. E.)

IV. The course in "Veterinary Science," two years in length, leading to the degree of "Bachelor of Veterinary Medicine," (B. V. E.)

In examining the scope and extent of the work required in these several courses, your committee were deeply impressed with the admirable and practical plans upon which they have been built up during the fifteen years of the most successful life of the College.

The first of them, the "course in the sciences related to the industries," is found to contain among other studies a very full course in mathematics, physics, chemistry, entomology, botany, geology, political economy, commercial law, English literature, etc.

All these seem to your committee to be branches of learning related to agriculture and the mechanic arts, and if strengthened by adding thereto history and by an extension of the course in English literature, to be pre-eminently adapted "to promote the liberal and practical education of the industrial classes," as required in the words of the act of Congress.

The "course in agriculture" of four years leads the student through the whole course of the sciences underlying the work of the scientific and practical agriculturist, including most of the scientific and literary work of the general "course in science," but with additional work in the laboratory and on the farm, with the microscope, the blow-pipe, the test tube, and the dissecting knife, together with special instruction and practice in the management and breeding of stock, the rotation of crops and other practical matters.

This course also includes a very practical as well as scientific course in horticulture and forestry, which, indeed, runs through all the courses of study, but has its fullest development here. Your committee could see the practical character of the work required in this course of study during their examination of the farm with its buildings, stock and tools.

In examining the course in "mechanical engineering" your committee were shown the machinery and fixtures just going into place in the new building erected out of the last appropriation of the General Assembly.

Here students are not only thoroughly taught the mathematical principles underlying their art, but are required also to put their hands to the tools and machinery and work out in metal or wood the various problems given them so that when they go beyond the walls of College they are not only theoretical students, but also practical workmen, so that they are ready to take their places in the industrial battle of life as *doers* as well as thinkers.

The honored motto of the College is "science with practice" and in all their examinations your committee observed the most admirable manner in which they seem to have been blended in all the courses of study by their founders.



The courses in "civil engineering" and in "veterinary science" came also under observation, and while space will not permit details, your committee are glad to say in general terms that they are glad to say in general terms that they seem to be organized and conducted with the same wise blending of science with practice which characterizes all the courses of study provided and pursued at the College.

Your committee feel that their duty would not be fully discharged did they fail to place on record the conviction forced upon them and strengthened by every step in their examination that in its Agricultural College and the means of education gathered there by the experience of years the State of Iowa has in charge as a sacred birth-right for its children, a great and not fully appreciated treasure, affording the best means at its disposal of imparting the new education, the education which makes the student acquainted with things themselves as well as with words and ideas, which trains and practices the eye and the hand as well as the memory and the reason and turns out students the best fitted to meet and conquer the practical problems of life in this intensely industrial and practical age.

Your committee unanimously agreed with the assembled faculty that a broader culture in history and literature would add strength to the general "course in science" but beyond that no desirable change was suggested, or deemed necessary to make the courses of study conform to the high ideal so happily expressed in the words of the act of Congress providing the means by which the College exists.

In conclusion, your committee desire to express their conviction, as the result of their investigation, that the State Agricultural College is worthy to be placed on the same broad and liberal basis as to numbers as well as to the high character and ability of the individual members of its board of managers that the State University enjoys, and that the cause of scientific and practical education in the State will be benefitted by such action.

All of which is most respectfully submitted.

Signed,

C. L. WATROUS,  
JOHN MANDERSHEID, } *Committee.*  
P. M. SUTTON.

## NINTH BIENNIAL REPORT

OF THE

BOARD OF TRUSTEES

OF THE

## IOWA SOLDIERS' ORPHANS' HOME

AND HOME FOR INDIGENT CHILDREN.

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JUNE 30, 1883.

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[PRINTED BY ORDER OF THE GENERAL ASSEMBLY.]

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